National Institute of Environmental Health Sciences

Climate change and occupational health and safety in a temperate climate: Potential impacts and research priorities in Quebec, Canada

Author(s): Adam-Poupart A, Labrèche F, Smargiassi A, Duguay P, Busque MA, Gagné C, Rintamäki H, Kjellstrom T, Zayed J

Year: 2013

Journal: Industrial Health. 51 (1): 68-78

Abstract:

The potential impacts of climate change (CC) on Occupational Health and Safety (OHS) have been studied a little in tropical countries, while they received no attention in northern industrialized countries with a temperate climate. This work aimed to establish an overview of the potential links between CC and OHS in those countries and to determine research priorities for Quebec, Canada. A narrative review of the scientific literature (2005-2010) was presented to a working group of international and national experts and stakeholders during a workshop held in 2010. The working group was invited to identify knowledge gaps, and a modified Delphi method helped prioritize research avenues. This process highlighted five categories of hazards that are likely to impact OHS in northern industrialized countries: heat waves/increased temperatures, air pollutants, UV radiation, extreme weather events, vector-borne/zoonotic diseases. These hazards will affect working activities related to natural resources (i.e. agriculture, fishing and forestry) and may influence the socioeconomic context (built environment and green industries), thus indirectly modifying OHS. From this consensus approach, three categories of research were identified: 1) Knowledge acquisition on hazards, target populations and methods of adaptation; 2) Surveillance of diseases/ accidents/occupational hazards; and 3) Development of new occupational adaptation strategies.

Source: http://dx.doi.org/10.2486/indhealth.2012-0100

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Extreme Weather Event, Solar Radiation, Temperature

Temperature: Extreme Heat, Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Non-U.S. North America

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Dermatological Effect, Infectious Disease, Injury, Mental Health/Stress, Morbidity/Mortality, Neurological Effect, Respiratory Effect, Urologic Effect, Other Health Impact

Infectious Disease: Vectorborne Disease, Zoonotic Disease

Vectorborne Disease: Mosquito-borne Disease, Tick-borne Disease

Mosquito-borne Disease: Viral Encephalitis, Viral Encephalitis, Viral Encephalitis, West Nile Virus

Tick-borne Disease: Lyme Disease, Tick-borne Encephalitis

Zoonotic Disease: Brucellosis, General Zoonotic Disease, Hantavirus Pulmonary Syndrome

Mental Health Effect/Stress: Other Mental Disorder

Respiratory Effect: Asthma, Upper Respiratory Allergy

Other Health Impact: heat stroke; heat related illness

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Workers

Resource Type: ☑

format or standard characteristic of resource

Review

Timescale: ☑

time period studied

Time Scale Unspecified